

AMENDMENTS TO THE CLAIMS

1. (Previously presented) A data transmission system comprising:
a transmitting apparatus that transmits a scene description; and
a receiving apparatus that constructs a scene according to the scene description;
wherein the transmitting apparatus comprises:

an elementary stream (ES) processing means that transfers at least one ES,
which conforms to at least one of a transmission line state and a request issued from
the receiving apparatus,

a scene description processing means that transfers and modifies a scene
description to conform to a corresponding quality of the at least one ES from the ES
processing means by adjusting the properties assigned to the ES within the scene
description, and

wherein the transmitting apparatus appends time information to the at least one ES and the
scene description; and

wherein the receiving apparatus monitors the time information sent from the transmitting
apparatus and detects a delay in transmission using the time information.

2-13. (Cancelled)

14. (Previously presented) A data transmitting method for transmitting a scene description
that describes at least one elementary stream (ES) used to construct a scene, and constructing the
scene according to the scene description, comprising:

transmitting at least one ES, which conforms to at least one of a transmission line state and a
request issued from the receiving side;

transmitting a scene description that conforms to the at least one ES;

appending time information to the transmitted scene description; and

monitoring the time information to detect delays in transmission using the time information.

15-26. (Cancelled)

27. (Previously presented) A data transmitting apparatus for transmitting a scene description that describes at least one elementary stream (ES) used to construct a scene, comprising:

an ES processing means that transfers at least one ES, which conforms to at least one of a transmission line state and a request issued from a receiving side;

a scene description processing means for transferring and modifying a scene description, in accordance with the at least one ES from the ES processing means, by adjusting the properties assigned to the ES within the scene description.

28. (Previously presented) A data transmitting apparatus according to Claim 27, further comprising:

a memory means in which a plurality of predefined scene descriptions are stored corresponding to a plurality of possible qualities of the at least one ES;

wherein the scene description processing means selects the scene description from among the plurality of scene descriptions stored in the memory means, and transmits the ~~said~~ scene description.

29. (Previously presented) A data transmitting apparatus according to Claim 27, further comprising:

a memory means in which at least one predefined scene description is stored;

wherein the scene description processing means converts a predefined scene description read from the memory means into the scene description based on the corresponding quality of the at least one ES, and transfers the scene description.

30. (Previously presented) A data transmitting apparatus according to Claim 27, wherein the scene description processing means encodes the scene description and transmits the scene description.

31. (Cancelled)

32. (Previously presented) A data transmitting apparatus according to Claim 27 wherein the scene description processing means transfers the scene description, which comprises information necessary for the receiving side to decode the at least one ES from the ES processing means.

33. (Previously presented) A data transmitting apparatus according to Claim 27, further comprising:
wherein the scene description processing means transfers a scene description that specifies whether the at least one ES is to be used to construct a scene are used or not.

34. (Previously presented) A data transmitting apparatus according to Claim 27, wherein the scene description processing means transfers a scene description whose complexity conforms to the at least one ES.

35. (Previously presented) A data transmitting apparatus according to Claim 34, wherein the scene description processing means transfers a scene description, wherein a first scene part within a scene is replaced with a second scene part whose complexity is different from the complexity of the first scene part, in accordance with the at least one ES.

36. (Previously presented) A data transmitting apparatus according to Claim 34, wherein the scene description processing means transfers a scene description, in which a scene part within a scene is removed or a new scene part is added to the scene, in accordance with the at least one ES.

37. (Previously presented) A data transmitting apparatus according to Claim 34, wherein the scene description processing means modifies a quantization step, in which a scene description is encoded, in accordance with the at least one of the transmission line state, the request issued from the receiving side, and the at least one ES.

38. (Previously presented) A data transmitting apparatus according to Claim 27, wherein the scene description processing means divides a scene description into a plurality of decoding units in accordance with the at least one of the transmission line state, the request issued from the receiving side, and the at least one ES.

39. (Previously presented) A data transmitting apparatus according to Claim 38, wherein the scene description processing means adjusts a time interval between time instants at which the receiving side decodes each of the plurality of decoding units into which a scene description is divided.

40. (Previously presented) A data transmitting method for transmitting a scene description that describes the properties of at least one elementary stream (ES) used to construct a scene, comprising:

transmitting at least one ES, which conforms to at least one of a transmission line state and a request issued from the receiving side;

transmitting a scene description in accordance with the corresponding quality of the at least one ES;

appending time information to at least one of the transmitted scene description and the at least one ES.

41. (Previously presented) A data transmitting method according to Claim 40, further comprising:

storing a plurality of predefined scene descriptions corresponding to a plurality of possible qualities of the at least one ES; and

selecting the scene description from among the plurality of scene descriptions.

42. (Previously presented) A data transmitting method according to Claim 40, further comprising:

storing at least one predefined scene description; and
converting a predefined scene description into another scene description corresponding to the quality of the at least one ES.

43. (Previously presented) A data transmitting method according to Claim 40, further comprising encoding the scene description.

44. (Cancelled)

45. (Previously presented) A data transmitting method according to Claim 40, wherein the scene description further comprises information necessary for the receiving side to decode the at least one ES.

46. (Previously presented) A data transmitting method according to Claim 40, wherein the scene description specifies whether to use the at least one ES.

47. (Cancelled)

48. (Previously presented) A data transmitting method according to Claim 40, further comprising a first scene part within a scene with a second scene part, whose complexity differs from the complexity of the first scene part, in accordance with the at least one ES.

49. (Previously presented) A data transmitting method according to Claim 40, further comprising modifying the scene description, by removing a scene part within a scene or adding a new part to the scene, in accordance with the at least one ES.

50. (Previously presented) A data transmitting method according to Claim 40, further comprising modifying a scene description encoding step in accordance with a quantization step in

accordance with the at least one of the transmission line state, the request issued from the receiving side, and the at least one ES.

51. (Previously presented) A data transmitting method according to Claim 40, further comprising dividing the scene description into a plurality of decoding units in accordance with at least one of the transmission line state, the request issued from the receiving side, and the at least one ES.

52. (Previously presented) A data transmitting method according to Claim 51, comprising adjusting the division step in accordance with a time interval between time instants at which a receiving side decodes each of the plurality of decoding units.

53-77. (Canceled)

78. (Previously presented) A data transmission system comprising:
a transmitting apparatus that transmits a scene description; and
a receiving apparatus that constructs a scene according to the scene description;
wherein the transmitting apparatus comprises:

a elementary signal (ES) processor that transfers at least one ES used to construct the scene, in accordance to the transmission capacity, and

a scene description processor that transmits a scene description and a time information, the scene description conforming to a transmission capacity, the transmission capacity being derived from at least one of a transmission line state, a request issued from the receiving apparatus, or known available resources of the receiving apparatus;

wherein the receiving apparatus monitors the time information sent from the transmitting apparatus to detect a delay in the transmission; and

wherein the scene description includes objects, the objects comprising at least one node and at least one signal used to construct the scene, each the node describing an object or a relationship between objects.

79-94. (Cancelled)

95. (Previously presented) A data receiving apparatus for receiving a scene description that describes at least one elementary stream (ES) used to construct a scene, comprising:

an ES decoding unit that receives at least one ES, which conforms to at least one of a transmission line state and a request issued from the data receiving apparatus;

a scene description decoding unit for constructing a scene description, in which the properties assigned to the ES within the scene description conform to the at least one ES.

96. (Previously presented) A data receiving apparatus according to Claim 95, wherein the scene description is transmitted from a server side which includes a scene description processing unit that selects the scene description from among the plurality of scene descriptions stored in a memory, and transmits the scene description.

97. (Previously presented) A data receiving apparatus according to Claim 95, wherein the scene description is transmitted from a server side which converts a predefined scene description read from a memory into the scene description based on the corresponding quality of the at least one ES, and transmits the scene description.

98. (Previously presented) A data receiving apparatus according to Claim 95, wherein the scene description specifies whether the at least one ES is to be used to construct the scene.

99. (Previously presented) A data receiving apparatus according to Claim 95, wherein the scene description complexity conforms to the at least one ES.

100. (Previously presented) A data receiving apparatus according to Claim 99, wherein the scene decoding unit receives a scene description, wherein a first scene part within a scene is replaced with a second scene part whose complexity is different from the complexity of the first scene part, in accordance with the at least one ES.

101. (Previously presented) A data receiving apparatus according to Claim 99, wherein the scene description decoding unit receives a scene description, in which a scene part within a scene is removed or a new scene part is added to the scene, in accordance with the at least one ES .

102. (Previously presented) A data receiving apparatus according to Claim 99, wherein the scene description is received in portions encoded based on a quantization step, in accordance with the at least one of the transmission line state, a request issued from the data receiving apparatus, and the at least one ES.

103. (Previously presented) A data receiving apparatus according to Claim 95, wherein the scene description is received in a plurality of divided parts encoded by a transmitting apparatus in accordance with the at least one of the transmission line state, the request issued from the receiving side, and the at least one ES.

104. (Previously presented) A data receiving apparatus according to Claim 103, wherein the scene transmitting apparatus adjusts a time interval between time instants at which the data receiving apparatus decodes each of the plurality of divided parts into which the scene description is divided.

105. (Previously presented) A data receiving method for receiving a scene description that describes the properties of at least one elementary stream (ES) used to construct a scene, comprising:

receiving at least one ES, which conforms to at least one of a transmission line state and a request issued from a receiving side;

receiving a scene description in accordance with the corresponding quality of the at least one ES;

wherein time information is appended to at least one of the received scene description and the at least one ES.

106. (Previously presented) A data receiving method according to Claim 105, wherein the scene description is selected from among a plurality of predefined scene descriptions corresponding to a plurality of possible qualities of the at least one ES.

107. (Previously presented) A data receiving method according to Claim 105, wherein the scene description is created by converting a predefined scene description based on the corresponding quality of the at least one ES.

108. (Previously presented) A data receiving method according to Claim 105, wherein the scene description further comprises information necessary for the receiving side to decode the at least one ES.

109. (Previously presented) A data receiving method according to Claim 105, wherein the scene description specifies whether to use the at least one ES.

110. (Previously presented) A data receiving method according to Claim 105, wherein in the scene description, a first scene part is replaced with a second scene part, whose complexity differs from the complexity of the first scene part, in accordance with the at least one ES .

112. (Previously presented) A data receiving method according to Claim 105, wherein in the scene description, a scene part is removed or added, in accordance with the at least one ES .

113. (Previously presented) A data receiving method according to Claim 105, wherein the scene description is encoded in a quantization step, in accordance with the at least one of the transmission line state, the request issued from the receiving side, and the at least one ES.

114. (Previously presented) A data receiving method according to Claim 105, wherein the scene description is divided into a plurality of decoding units in accordance with at least one of the transmission line state, the request issued from the receiving side, and the at least one ES.

115. (Previously presented) A data receiving method according to Claim 114, wherein the scene description is divided in accordance with a time interval between time instants at which a receiving side decodes each of the plurality of decoding units.